

CLAIMS

1. Micromotor (1) for indicator hand device including a case inside which are housed motor means (20, 21, 22) and means (26) provided for transmitting the movement from said motor means to a drive shaft (29) with an axis X1 capable of driving an indicator hand (4), said case including a first face including an aperture (7) 5 making said drive shaft (29) accessible and a second face opposite said first face, the distance separating said first face from said second face defining a maximum thickness E1 of said case, said first and second faces being connected to each other by at least one lateral face, characterized in that said case has an area of thickness E2 that is smaller than said maximum thickness E1 so as to define an open recess 10 (34) in said second face, said recess (34) also being open on said lateral face.

2. Micromotor according to claim 1, characterized in that said recess (34) is arranged in an area of said second face at least partly located opposite said drive shaft (29).

3. Micromotor according to claim 1 or 2, characterized in that said drive shaft (29) is hollow, said second face of the case including an aperture (35) arranged substantially opposite said axis X1 of the hollow shaft.

4. Micromotor according to claim 3, characterized in that it further includes a support (41) arranged in the area of said aperture (35) for receiving a light source (42), the total thickness of the case and said light source support (41) being less than 20 or equal to the maximum thickness E1 of the case.

5. Micromotor according to claim 4, characterized in that said case includes a bottom (2) defining said second face and closed by a cover (3), said cover defining said first face, the bottom (2) having at least one setback (15) forming said recess (34).

25 6. Micromotor according to claim 1 or 2, characterized in that the areas of said case having a thickness substantially equal to said maximum thickness E1 correspond to a first volume area (16) of the interior of the case in which said motor means (20, 21, 22) are arranged, whereas the area of the case located substantially opposite said recess (34) corresponds to a second volume area (17) of the interior of 30 the case in which said drive shaft (29) is arranged.

7. Micromotor according to claim 1 or 2, characterized in that said second face of the case includes at least one foot (12, 13) for positioning and/or securing the case on a support (8).

8. Micromotor according to claim 3, further including mechanical means 35 (29, 30; 129, 140, 141, 144) allowing said hand (4; 104) to be disassembled a plurality

of times from the shaft (29; 129) without either of the latter elements undergoing damage rendering said elements unfit for use.

9. Micromotor according to claim 8, said mechanical means (30) being arranged in particular in said hollow shaft (29) which has a section, in a substantially perpendicular plane to said axis X1, in the form of an n-sided polygon, n being greater than or equal to 3, said stem (5) of the hand being cylindrical.

10. Micromotor according to claim 8, said mechanical means including in particular a ring (144) secured to said index (106) of said hand (143), said ring (144) being arranged concentrically around the base (143) of said index (106) of the hand (104) and having a substantially greater diameter than the external diameter of said shaft (129).

11. Indicator device for an instrument panel including a micromotor (1) according to any of the preceding claims, mounted on a printed circuit board (8).

12. Indicator device according to claim 11, when said micromotor is mounted on said printed circuit board (8) by the second face thereof, characterized in that at least one component (18) is arranged on said printed circuit board while being at least partially arranged in said recess (34).

13. Indicator device according to claim 12, when said drive shaft (29) is hollow, characterized in that said component (18) includes a light source (38), the indicator device further including an indicator hand (4) including a transparent stem (5), the later being housed in said drive shaft (29).